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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,752

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EXAMINER

BOAKYE, ALEXANDER O

ART UNIT

PAPER NUMBER

2616

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/808,752

Applicant(s)

LEE ET AL.

Examiner

ALEXANDER BOAKYE

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2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art of Figure 1.

Regarding claim 1, the admitted prior art of Figure 1 teaches a method for providing a user with traffic information (Fig.1), comprising the steps of: -a) a plurality of vehicles (10,11,12,16 and 19) broadcasting their registration messages (column 2, lines 1-5) ; b) creating an ad-hoc network between vehicles on the basis of registration messages broadcast by the vehicles (column1, lines 15-28);c) at least one Road Side Equipment (RSE)(20, 25, 30) receiving the registration messages broadcast by the vehicles, and collecting traffic information included in the registration messages(column 2, lines 6-11); and d) the RSE (20, 25, 30) transmitting the traffic information to a traffic information service center (column 2, lines 2-5 ; 40 of Fig. 1 corresponds to the claimed

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traffic information service center). The admitted prior art of Figure 1 does not explicitly disclose creating an ad-hoc network between vehicles but one of ordinary skill in the art would have been motivated to incorporate creating an ad-hoc network between vehicles into the communication system in order to be able to ease mobility management process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an ad-hoc network into the admitted prior art of figure 1 with motivation being that it provides capability to ease mobility management process.

Regarding claim 2, the admitted prior art of figure 1 teaches that the registration messages include vehicle motion information (column 2, lines 2-5).

Regarding claim 3, the admitted prior art of figure 1 teaches that the RSE (20, 25, 30 of Figure 1) broadcasting Identifier (ID) and position information of the RSE (220, 25, 30) to the vehicles (10,11,12,16 and 19); and enabling the RSE to be contained in the ad-hoc network (Fig.1).

Regarding claim 4, the admitted prior art of figure 1 teaches b1) the vehicles broadcasting warning messages over the ad-hoc network (column 1,lines 15-28); and b2) the RSE receiving the warning messages and collecting traffic information included in the warning messages (column 2,lines 6-11).

Regarding claim 5, the admitted prior art of figure 1 teaches e) the traffic information service center transferring the traffic information to other RSEs (column 1, lines 23-28) ; and f) the other RSEs transferring the traffic information to nearby vehicles over the ad-hoc network (column 2,lines 6-11).

Regarding claim 6, the admitted prior art of figure 1 teaches the steps of: a) vehicles (10,11,12,16 and 19) broadcasting their registration messages, and receiving the registration messages at the RSE (column 2, lines 6-11); b) registering the registration messages to a node management table and (10,11,12,16 and 19); and c) collecting traffic information from the registration messages and transferring the collected traffic information to the traffic information service center (column 2, lines 6-11 ; 40 of Fig. 1 corresponds to the claimed traffic information service center). The admitted prior art of Figure 1 does not explicitly disclose creating an ad-hoc network between vehicles but one of ordinary skill in the art would have been motivated to incorporate creating an ad-hoc network between vehicles into the communication system in order to be able to ease mobility management process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an ad-hoc network into the admitted prior art of figure 1 with motivation being that it provides capability to ease mobility management process.

Claim 7 is met as previously discussed with respect to claim 2.

Regarding claim 8, the prior art of record teaches that the step (b) includes the steps of: b1) the RSE (20, 25, 30) broadcasting a registration message having Identifier (ID) and position information of the RSE (20, 25, 30) to the vehicles (10,11, 12,16 and 19).

Regarding claim 9, the admitted prior art of figure 1 teaches the steps of: d) the RSE receiving warning messages broadcast from the vehicles over the ad-hoc network (column 2,lines 6-11); e) the RSE (20, 25,30) transferring the warning message to the

traffic information service center (40).

Regarding claim 10, the admitted prior art of figure 1 teaches a for providing a user with traffic information, comprising the steps of: a) vehicles broadcasting their registration messages (column 2, lines 6-11); b) the RSE (20, 25, 30) receiving the registration messages associated with the vehicles on the basis of the registration messages (column 2, lines 1-5); and c) the RSE receiving traffic information from a traffic information service center and transferring the traffic information to the vehicles (column 2, lines 6-11). The admitted prior art of Figure 1 does not explicitly disclose creating an ad-hoc network but one of ordinary skill in the art would have been motivated to incorporate creating an ad-hoc network into the communication system in order to be able to ease mobility management process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an ad-hoc network into the admitted prior art of figure 1 with motivation being that it provides capability to ease mobility management process.

Claim 11 is met as previously discussed with respect to claim

Regarding claim 12, the admitted prior art of figure 1 teaches that step (b) includes the steps of: b 1) the RSE (20, 25, 30) broadcasting a registration message of the RSE (20, 25,30 of Fig.1) to the vehicles (10,11,12,16 and 19 of Fig.1); and b2) the vehicles (10,11,12,16 and 19) receiving the registration message of the RSE (20, 25, 30 of Fig.1).

Regarding claim 13, the admitted prior art of figure 1 teaches an apparatus for providing a user with traffic information, comprising: a plurality of vehicles (10,11,12,16

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and 19) broadcasting their registration messages; at least one Road Side Equipment (RSE) for receiving the registration messages broadcast from the vehicles and collecting traffic information from the registration messages (column 2, lines 6-11); and a traffic information service center (40, Fig.1) for receiving the traffic information from the RSE (column 2, lines 2-5). The admitted prior art of Figure 1 does not explicitly disclose creating an ad-hoc network between vehicles but one of ordinary skill in the art would have been motivated to incorporate creating an ad-hoc network into the communication system in order to be able to ease mobility management process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an ad-hoc network into the admitted prior art of figure 1 with motivation being that it provides capability to ease mobility management process.

Regarding claim 14, the admitted prior art of figure 1 teaches that the RSE (20, 25, 30 of Fig.1) broadcasts a registration message having its own position information to the vehicles (10, 11, 12, 16 and 19) and participates in the ad-hoc network.

Regarding claim 15, the admitted prior art of figure 1 teaches a Road Side Equipment (RSE) apparatus (Fig. 1) for collecting traffic information from a plurality of vehicles (10,11,12,16 and 19), and transferring the collected traffic information to the traffic information service center (40 of Fig.1) in a system for providing a user with traffic information, said RSE apparatus (Fig.1) comprising: a Radio Frequency (RF) unit (the claimed RF unit is contained in the vehicles) for receiving registration messages broadcast from the vehicles and broadcasting a registration

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message of the RSE (column 2, lines 2-5); a controller associated with the vehicles (10,11,12,16 and 19) on the basis of the registration messages of the vehicles and generating traffic information from the registration messages (column 2, lines 2-5); and a communication interface (20, 25, 30) for transferring the traffic information to the traffic information service center (40, Fig. 1). The admitted prior art of Figure 1 does not explicitly disclose creating an ad-hoc network but one of ordinary skill in the art would have been motivated to incorporate creating an ad-hoc network into the communication system in order to be able to ease mobility management process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an ad-hoc network into the admitted prior art of figure 1 with motivation being that it provides capability to ease mobility management process.

Regarding claim 16, the admitted prior art of figure 1 teaches that the controller (the claimed controller is inherent in the vehicles 10,11,12,16 and 19) registers the registration messages of the vehicles to a node management table (the claimed node management table is inherent in the vehicles).

Regarding claim 17, the prior art of figure 1 teaches that the RF unit receives warning messages broadcast from the vehicles over the ad-hoc network, and the controller creates the traffic information by referring to the warning messages (column 2, lines 1-5).

Regarding claim 18, the admitted prior art of figure 1 teaches that the communication interface receives traffic information from the traffic information service center (40), and the controller transfers the traffic information received from the traffic

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information service center (40) to the vehicles (10,11,12,16 and 19) contained in the ad-hoc network.

Regarding claim 19, the prior art of figure 1 teaches a position information receiver (the position receiver is inherent in the vehicles) for detecting position and time information of the RSE (column 2, lines 6-11).

Regarding claim 20, the prior art of record teaches that the vehicle is selected from a car (column 1, lines 23-28).

Claim 21 is met as previously discussed with respect to claim 20.

Claim 22 is met as previously discussed with respect to claim 20.

Claim 23 is met as previously discussed with respect to claim 20.

Claim 24 is met as previously discussed with respect to claim 20.

Response to Arguments

2. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's

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supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or PUBLIC PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Electronic Business Center (EBC)** numbers at 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner

AB

01/06/08


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SUPERVISORY PATENT EXAMINER
1/7/08